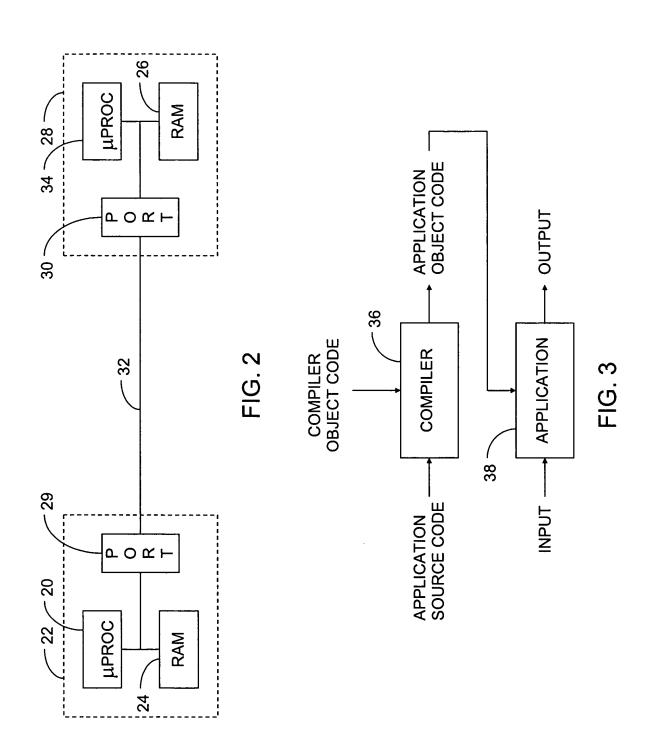
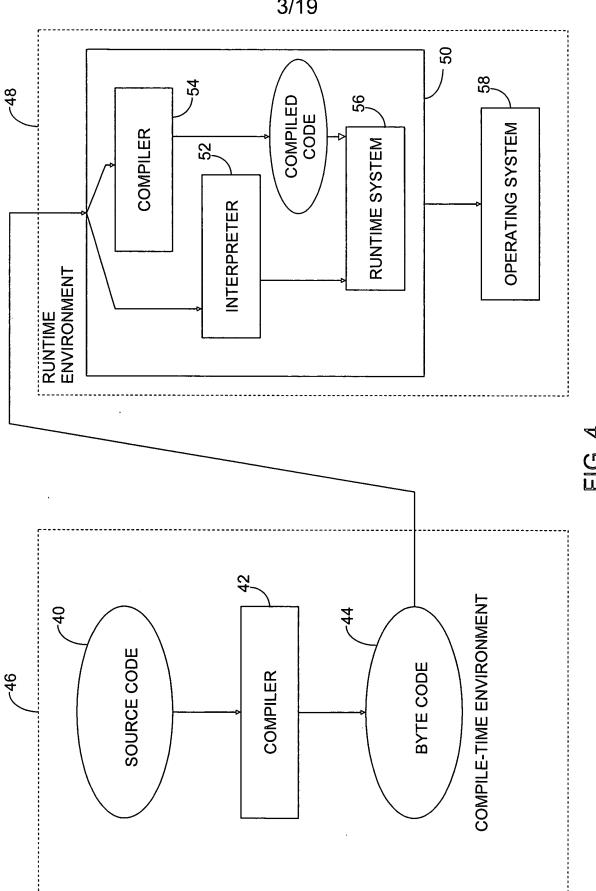


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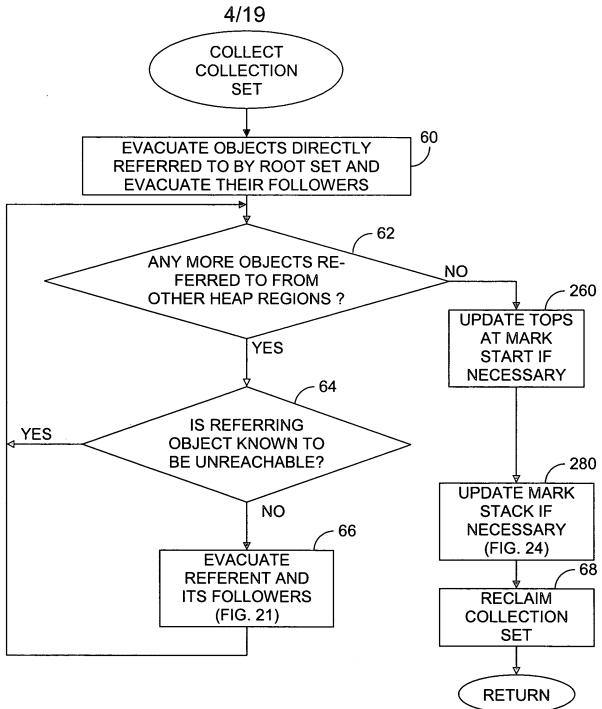
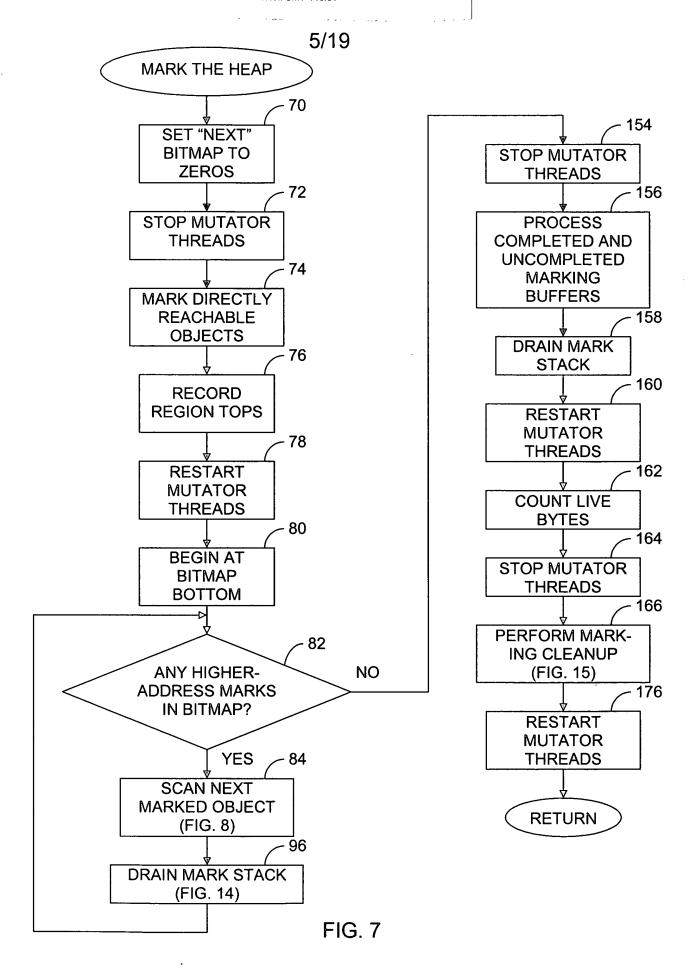


FIG. 5



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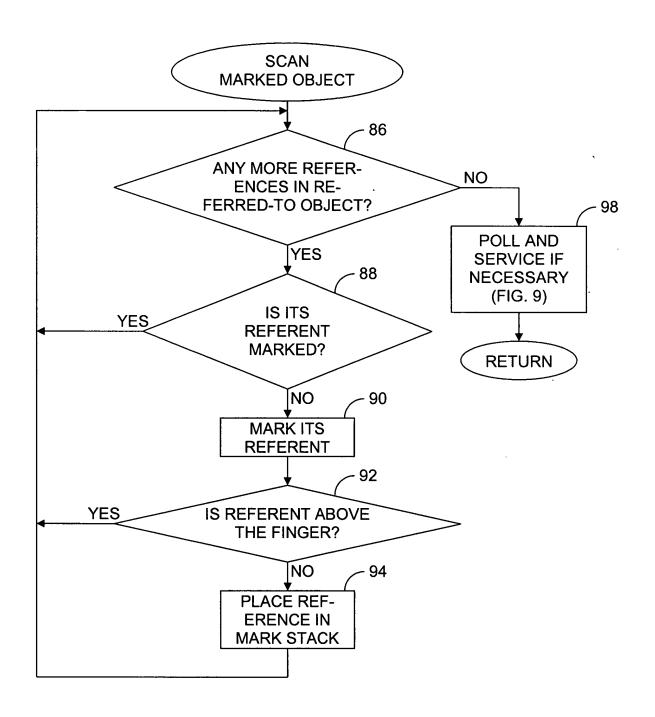


FIG. 8

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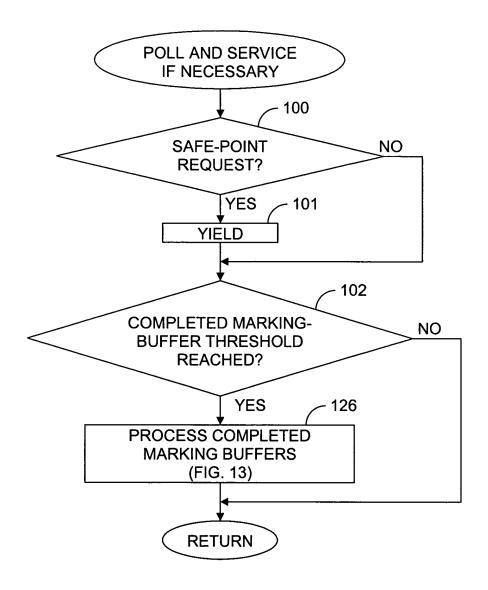
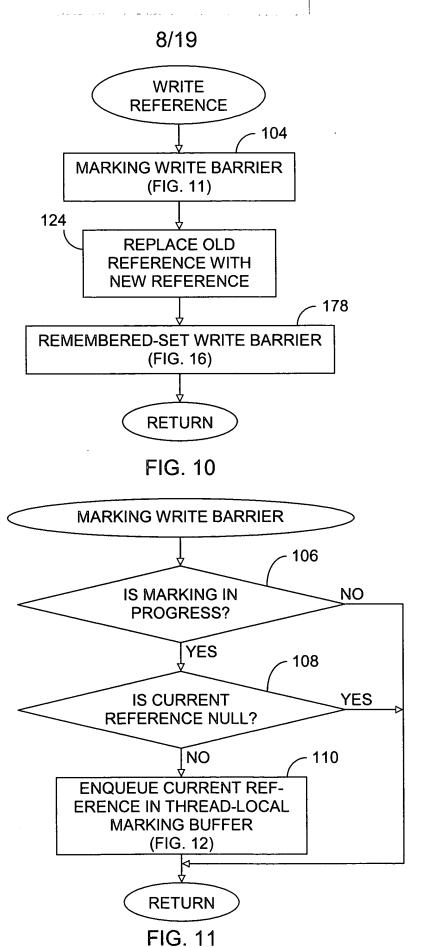


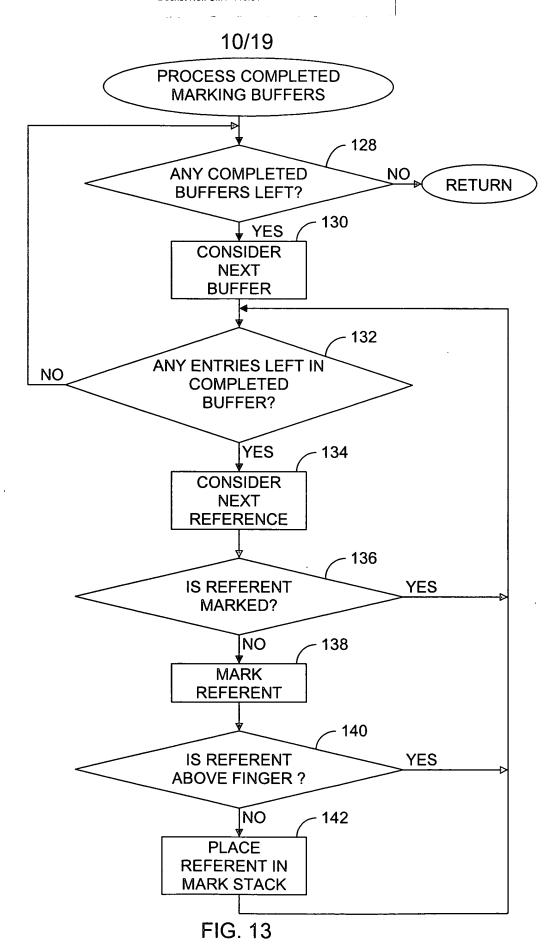
FIG. 9

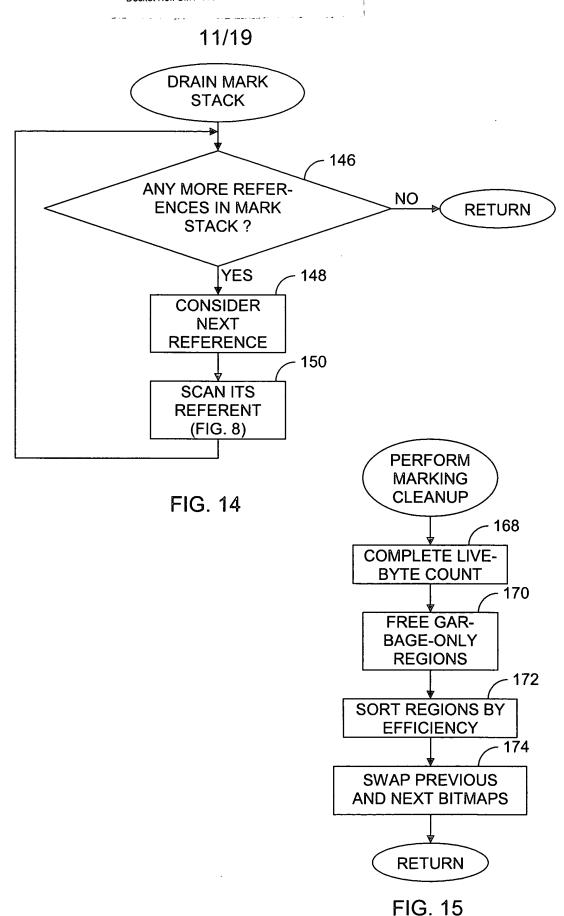


Inventor(s): Detlefs et al. Application No.: Not Yet Assigned Docket No.: SMY-110.01 9/19 **ENQUEUE IN** THREAD-LOCAL MARKING BUFFER 112 NO IS BUFFER FULL? YES 114 ADD BUFFER TO GLOBAL **COMPLETED-BUFFER LIST** 116 NO HAS COMPLETED-BUFFER LIST'S SIZE REACHED THE THRESHOLD? YES 118 **SET FLAG** 120 ALLOCATE NEW THREAD-LOCAL MARKING BUFFER 122 ADD REFERENCE VALUE TO THREAD-LOCAL MARKING BUFFER **RETURN**

Title: Garbage-First Garbage Collection

FIG. 12





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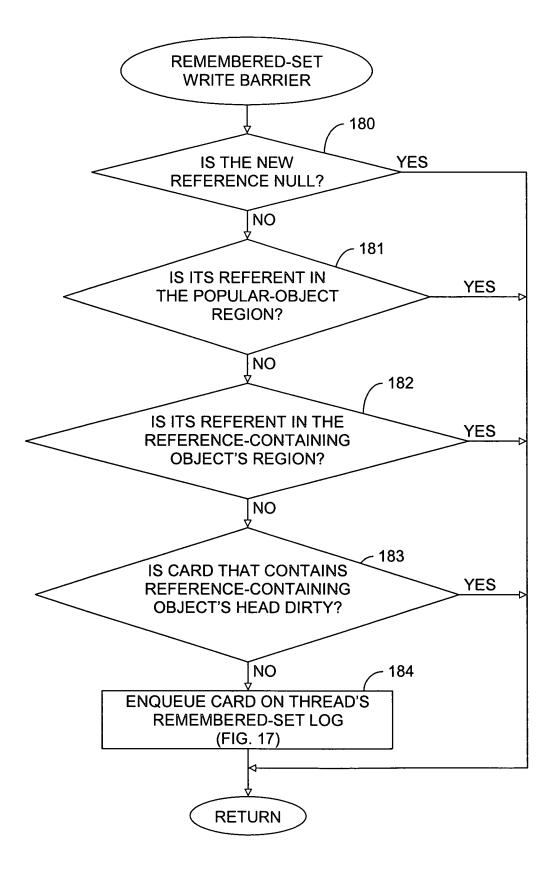


FIG. 16

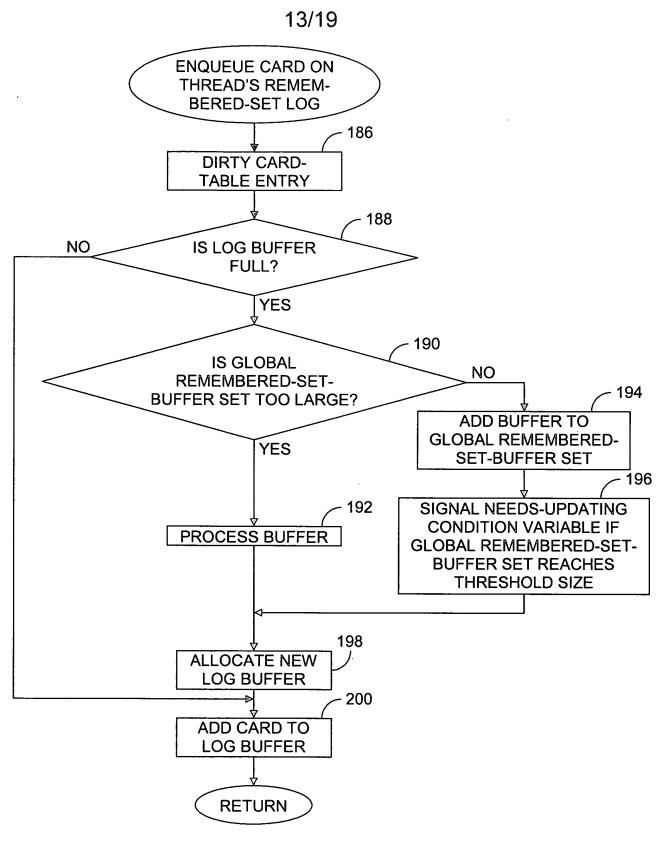
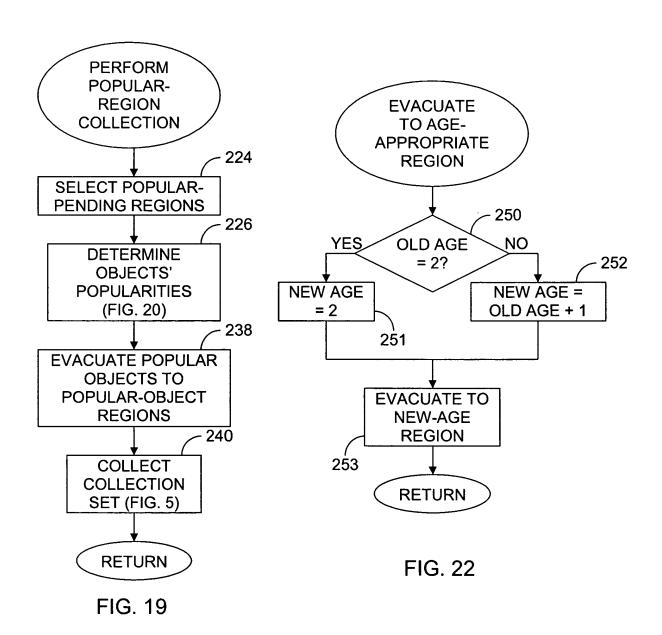


FIG. 17

Inventor(s): Detlefs et al. Application No.: Not Yet Assigned Docket No.: SMY-110.01 14/19 **UPDATE** REMEMBERED SETS CONCURRENTLY 204 NO **ANY BUFFER RETURN ENTRIES LEFT?** - 206 YES 212 RESET NEXT ENTRY **SET ENTRY** TO "CLEAN" TO "DIRTY" 208 SCAN FOR NEXT REFERENCE - 210 **WAS SCAN** NO SUCCESSFUL? YES - 214 **ANY REFERENCE** NO LEFT? YES 216 IF NECESSARY, ADD REFERENCE'S ADDRESS TO (THREAD-SPECIFIC) REMEM-BERED SET AND INCREMENT ITS **ENTRY COUNT** 218 DOES REMEMBERED SET'S EN-NO TRY COUNT EXCEED THE POPU-LARITY THRESHOLD? 220 YES ADD REGION TO POPULAR-**PENDING LIST** FIG. 18

Title: Garbage-First Garbage Collection

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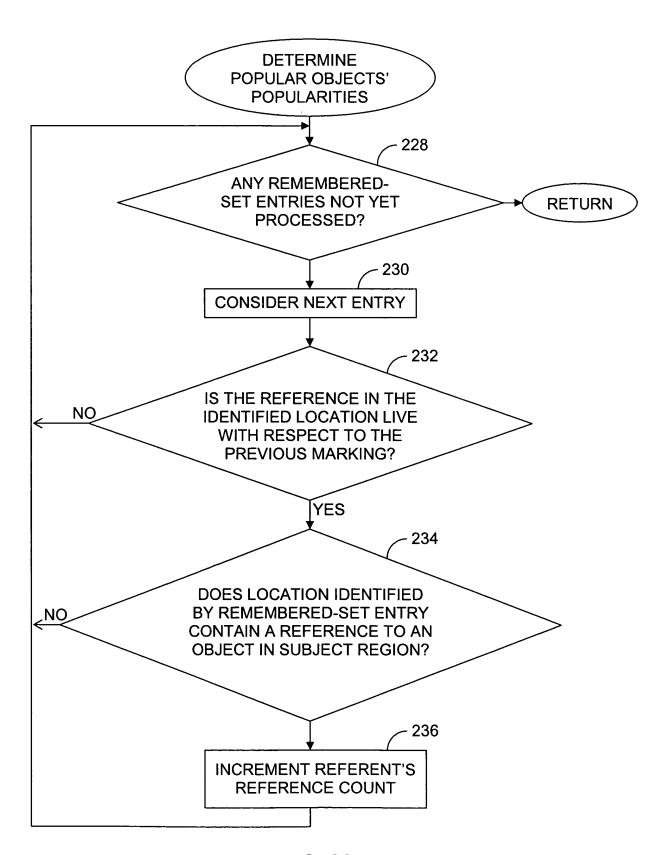
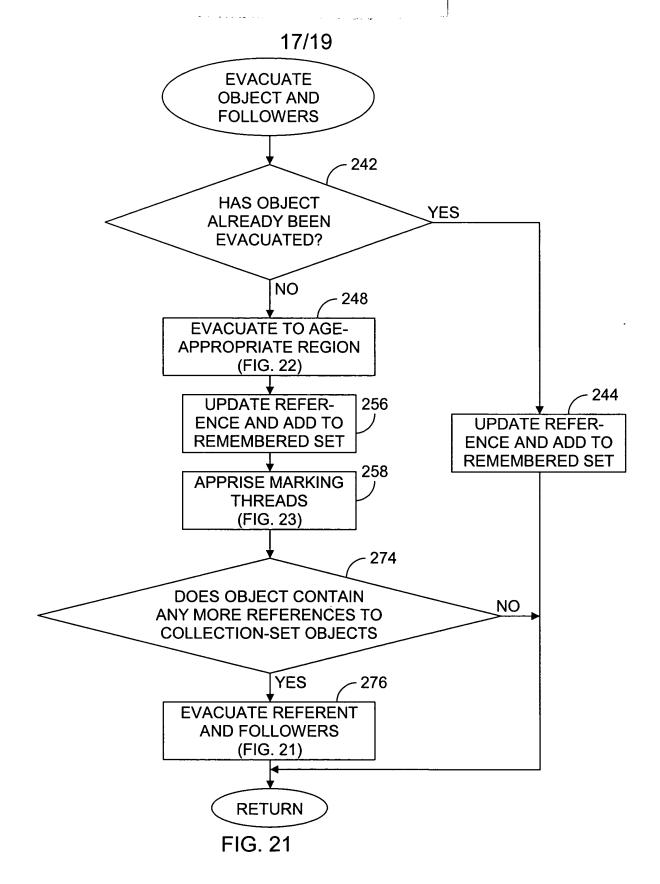


FIG. 20



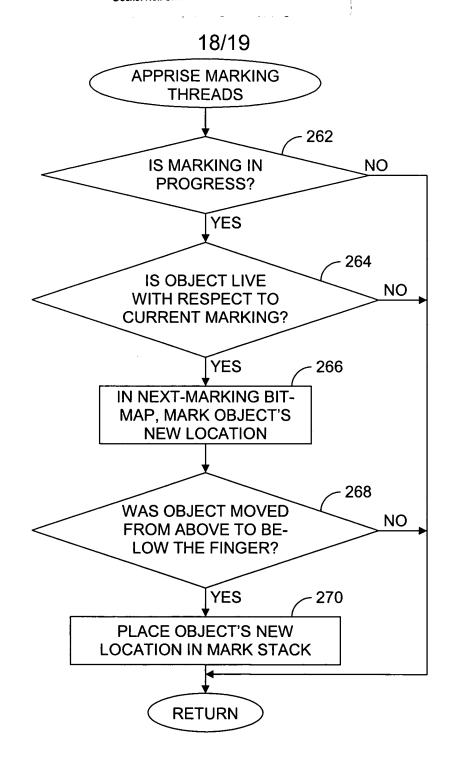


FIG. 23

